UNESCO SOURCES

WHAT ON EARTH'S THE MATTER?

THE RIO CONFERENCE

N°37 - MAY 1992

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UNESCO AND THE GREAT DEBATES OF OUR TIME

Reuben M. Molefe
Journalist
Dar es Salaam, Tanzania

With reference to your article entitled "The Impertinent Humanist" (SOURCES No. 34, February 1992), I wish to comment on a few points raised by French Academician Jean d'Ormesson. But first, let me hurriedly say, I read the article with the utmost enthusiasm.

I am not in the best position to pay tribute to d'Ormesson, but I must say the two decades he spent as an ardent figure within the International Council for Philosophy and Humanistic Studies enabled him to accumulate enormous and enviable experience within UNESCO.

To a certain extent I am inclined to share his fears on the future of the Organization now that "young people are no longer inspired by UNESCO as they should be". The fears of d'Ormesson are a mere reiteration of UNESCO's long standing attempt to avoid complacency in its global or international commitment, especially by viewing things on a long range basis.

What is pertinent and needs to be emphasized are perhaps such issues as AIDS, democracy, etc., themes of current and constant debate. It is within this context that I fully concur with him.

But if, for example, we take French students - who, d'Ormesson says, "flocked to debates" at Headquarters during the 1960s - as a barometer of the fulfilment of UNESCO's objectives, then certainly we are liable to conclude that UNESCO is doomed to failure. It is true the NGOs could play a fundamental role in an enterprise aimed at combating "lassitude and inertia".

In the 1980s when the U.S. withdrew its membership from UNESCO on the argument that the Organization was misuing funds, many analysts predicted that UNESCO would collapse. What subsequently emerged is that UNESCO was able to make the necessary adjustments and, through this was able to sustain its uninterrupted existence.

Our hope is that this work may continue independent of all criticism and inspite of the "ups and downs" of our world.

AIDS: SHOCK SLOGANS TO SPREAD THE MESSAGE

Dr. A. Jagadeesh
Society of Science for the People
Nellore, India

I read with interest your December issue and am happy that UNESCO is utilising the expertise of NGOs in developmental activities. On page 21 there was a note on AIDS. Sometimes slogans help to bring awareness among people. In India the slogan "Delay the first, space the second and stop the third" was quite effective in the Family Planning Programme. Likewise I suggest the following slogans to spread the message on the deadly disease AIDS: **Avoid Indecent Sex = AIDS; Acquired In Damned Sex = AIDS**

Participants at a recent UNESCO seminar on AIDS offered no slogans, but neither did they disparage sex as such. They however, agreed that what should be promoted was a healthy attitude towards sex and a sense of responsibility. (see article "The Spiritual Dimension" page 23 this issue). How about "Avoid Irresponsible and Demeaning Sex = AIDS" or perhaps more positively "Adopt Instead Devices That Save = AIDS". Ed.

PROUD OF UNESCO'S WORK

Idalina Cruz da Rocha
Business Manager
Kingston
Canada

My sincere thanks and congratulations for your excellent publication, UNESCO Sources.

The articles in the magazine enable us to travel around the world, gaining all kinds of experiences and the more we ourselves are enriched, the stronger our pride in the valuable work UNESCO is doing.

PLEASE CHANGE!

Indra Kalita, Director
YFC UNESCO Association
Golaghat, Assam,
India

We find your magazine very informative, educative and useful. We, however, have a few suggestions: kindly avoid the colour red and use sky blue colour to print the cover, or change the colour for every issue. Please devote at least one page to UNESCO Clubs, including photos on their activities. Please also print the "Photo of the Month" over two pages in the middle of the magazine so that it can be used as a poster and exhibited by interested organizations.

We appreciate your excellent ideas, but must take into account long-pondered choices and technical constraints. Indeed red was purposely selected to contrast with the blue generally used in UN publications. Systematically changing the colour would complicate the printing process. Since graphic and statistical material often covers two pages, it is preferable to publish these elements on a single sheet of paper. But, this said, we are always open to outside suggestions. - Ed.

This issue is printed on recycled paper

MARKING A MILESTONE

Some 50,000 people, most of the world's heads of state and at least 5,000 journalists will gather in Rio de Janeiro next month (June 3-14) for the United Nations Conference on the Environment and Development. The event promises to mark a milestone in history even if its results do not directly respond to the stakes involved or fulfil the hopes it has aroused.

It will prove a milestone first and foremost because of its recognition that the environment and development are indivisible. Development in the North must reduce the consumption of raw materials, most of which are imported from the South, and cut production of toxic wastes. Development in the South, must work towards bringing an end to the poverty that is increasingly responsible for such environmental destruction as deforestation, desertification and galloping urbanization.

A milestone also because the notion of interdependence will also be formally acknowledged. This interdependence justifies the global character of this Earth Summit and will no doubt permeate all of its aspects. The acceptance of the globalization of environmental problems, as with development, has already been won in many domains. It is today well understood that an environmental problem in one locality can have repercussions on regions thousands of kilometres away.

The stakes at Rio are very high. To respond, all nations, from richest to poorest, must unite their forces. Nothing less than a global pact must be reached and such a pact can only be based on the equitable sharing of means, knowledge and "clean" technology. It would also entail sharing the immense effort required for the task at hand. Ethics as much as reality demand that those who can, must contribute the most.

But what, how much, by what means, under whose authority and with what controls? These questions, which have been under discussion for months, have resulted in a radical review of established orders. However an overhaul of these orders may well be beyond the reach of the Rio participants.

But even if it doesn't succeed in launching an "environmental revolution", the Earth Summit will certainly push the idea to the top of political agendas, and this in itself will be a major achievement.

René LEFORT

Changing sea-levels: indicators of a changing planet.

The youngest victims.

Checking environmental damage in the Gulf.

Cover design : © GRANGER

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THIS ISSUE OF UNESCO SOURCES IS PRINTED ON RECYCLED PAPER.

Editorial and Distribution Services : Unesco Sources, 7 place de Fontenoy, 75700 Paris. Tel. : (1) 45 68 10 00, Fax : 45 67 30 72, Telex : 200472 France. This magazine is destined for use as an information source and is not an official Unesco document. ISSN 1014-6989.

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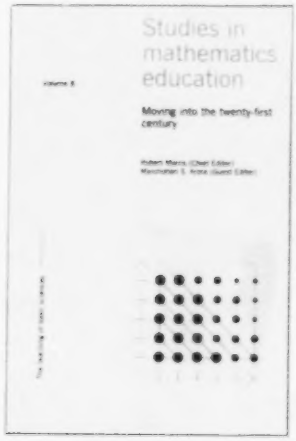
BOOKS

STUDIES IN MATHEMATICS EDUCATION

Addressing the resounding question of the 1980s, extending into the 1990s: "Why are literates from school so mathematically illiterate?" this volume, the eighth in UNESCO's *Studies in Mathematics Education* series, takes stock of mathematics education today and the role it plays in preparing students for the 21st century. To do the job, Guest Editor Manmohan S. Arora of the University of Bahrain has gathered contributions around the world, including a final chapter by Alan Rogerson (Australia) devoted to the current state and future trends of computing in schools.



● ***Studies in Mathematics Education: Moving into the twenty-first century**, by Robert Morris, Editor and Manmohan S. Arora, Guest Editor, (The teaching of basic sciences: mathematics) Vol. 8, UNESCO 1992, 227 pp., 75 FF.*

ISLANDS' CULTURE AND DEVELOPMENT

This book is a collection of the most significant papers presented at an International Seminar on the subject organized by UNESCO and the Foundation for Africa-Caribbean-Pacific (ACP)/ European Economic Community (EEC) Cultural Cooperation in Mauritius in 1989. At the seminar, experts and planners from three groups of island countries (Indian Ocean, Caribbean, Pacific) reflected on the specific problems and particular needs of island developing countries, highlighting fields of action and strategies facilitating their sustainable development.

● ***Islands Culture and Development**. UNESCO 1991, Future-oriented studies, Bilingual English/French, 245 pp., 100FF.*

CATALOGUE OF PERIODICALS HELD BY THE IBE

The present catalogue, of about 1,000 educational periodicals currently received in the Documentation Centre of UNESCO's Geneva-based International Bureau of Education (IBE), is presented as NO. 258/259 of the IBE *Bulletin*. The fourth edition of the catalogue, it aims at making the resources of the Centre, which also houses more than 100,000 publications and 250,000 microfiches and operates the International Network for Educational Information (more than 100 centres) known to a wider public. It is indexed geographically by country (75), region, by publishing institution, and by subject using terms drawn from the UNESCO: IBE Education Thesaurus.

● ***Catalogue of Current Periodicals Held by the Documentation Centre of the IBE**, 4th Ed., IBE Bulletin Nos. 258/259, UNESCO 1991, 167 PP., 50 FF.*

RECORDS

ARGENTINA
Tritonic Musics of the North-West

This recording was made in three different zones of the Argentinian North-West during the carnival period of 1988, of what is still a relatively little-known body of music. And yet the region, where each period of the year has its own *coplas* and *tonadas*, was the cradle of the most developed indigenous cultures on Argentine soil. Music here owes its survival to the conservation of the tritonic system, mainly sung or played by indigenous musicians now incorporated into the rural population, on the *erque*, a giant horn with a lateral mouthpiece, the *erquencho*, a rustic clarinet, and the little vertically notched flute, the *flautilla*.

● ***Argentina: Tritonic Musics of the North-West**. Musics & Musicians of the World series, UNESCO/Auvidis. Cassette 52 FF, Compact 109 FF.*

PERIODICALS

IMPACT of Science on Society

Chernobyl: taking stock. The Chernobyl nuclear disaster of 1986 has had social, medical and environmental consequences that are even today difficult to assess in spite of the considerable research undertaken in the meantime. Results of this research and of the International Chernobyl Project being carried out jointly by several international organizations are examined in two articles in this issue (No. 163). Other articles concern the impact of the accident on the environment, on nuclear decision-making, on the human dimensions of the catastrophe, as well as on information issues and the political control of science and technology.

THE UNESCO COURIER

Rediscovering 1492. The May **Courier** marks the fifth centenary of the event when, in the introductory words of Director-General, Federico Mayor, the *"two halves of the Earth were joined together and by discovering others we began to discover ourselves"*. Articles address the controversy over the nature of the event - discovery, clash, encounter, or missed opportunity?, present the "Portrait of a Continent" and, in "Prophecies and presentiments", describe the many old European myths and dreams embodied in what Columbus found. They also explore the sweeping changes to cartography brought by the great maritime discoveries, look at the Aztec, Inca and Maya Empires in "America before Columbus" and, finally, take stock of the American identity forged over the past five centuries by racial and cultural intermingling.

MUSEUM

1492 and Afterwards: Encounters Continue. Marking the UN/ UNESCO "Commemoration of the 500th Anniversary of the Encounter Between Two Worlds", this issue (No. 173) is devoted to what museums on both sides of the Atlantic are doing to highlight the artistic, architectural and other mutations wrought on the heels of Columbus' voyage. The magazine presents Afro-Cuban traditions in a museum near Havana, the Jewish Museum of Buenos Aires, another recording German immigration to Brazil, and tells the story of how and why peasant paintings from Nicaragua traveled to Denmark. Other articles show how the encounters continue, not only between Iberia, Latin America and the Caribbean but also with Africa, northern and eastern Europe and Asia.

Publications and periodicals are on sale at the Unesco Bookshop, or by order from Unesco Press, 7 place de Fontenoy, 75700 Paris, and in Member States through national distributors. Catalogue on request.

JOSE ANTONIO SISTIAGA: IN ANOTHER DIMENSION

A blue sphere set in a troubled universe and encrusted with continents the colour of emeralds and studded with a myriad of lights... or diamonds. The Earth, as seen by Basque artist and cinematographer, Jose Antonio Sistiaga, resembles a rare and precious jewel; a fitting

SISTIAGA AND HIS "IMPRESSIONS" (Photo montage UNESCO/Michel Claude)

comparison by any measure. So much so that it has been selected from the Basque painter's film *"Impressions from the Upper Atmosphere"* to illustrate the poster that will represent UNESCO's contribution to the U.N. Conference on the Environment and Development in Rio de Janeiro (Brazil, June).

"Impressions" is no ordinary film. The seven minute production comprises 10,000 images painted directly onto 70 mm film. *"It took me a year to complete, working 12-14 hours every day, depending on the light"* says Sistiaga, 59. One version of the work, which finishes *"violently"* is dedicated to Vincent Van Gogh he says, *"because I feel a certain emotional affinity with him"*.

Sistiaga's second such film, *"Impressions"* comes 20 years after a monumental feature-length production of more than 100,000 paintings on 35mm film which caused an uproar upon its release in 1970, but is now considered a classic of the genre.

According to the artist this first film was born from *"constant curiosity, imagination, reflection, silence, joy, humour and hazard... with a good supply of yogurt, by sleeping next to the film, in dampness and then, at the end, in warmth."*

Painting directly onto film is not new. It's a technique that has been used since the early days of cinema; when a touch of colour was needed on a black and white film, it was simply painted in...

"I turned to the cinema," the artist explains, *"because it allowed me to add movement to my work. It's working in another dimension. It's also a form of art that truly belongs to our century...*

"The image we have selected for the poster symbolizes, in an imaginary way, the Earth in space, without emphasis on any one aspect of the planet or its frontiers - which is why we chose it."

Although not a "hard-core" ecologist, Sistiaga puts himself amongst those who are convinced that the environment and development pose some of the most important questions now facing humanity.

"The industrialized world in particular needs to slow-down, to calm-down, and take the time to really think about where it's going. Perhaps the Rio conference will start that process in motion..."

Sue WILLIAMS

COUSTEAU AND THE CHILDREN: SETTING THE EXAMPLE

How can we protect the ozone layer?" "Is the sea-level rising?" "How can we stop desertification?" "What can we do to convince grown-ups to stop ruining the planet?"

These were some questions posed by 1200 children to Captain Jacques-Yves Cousteau at UNESCO headquarters on April 15. The encounter had been organized to promote the rights of future generations to a healthy world, *"an uncontaminated planet where all forms of life can thrive"*. A petition calling for recognition of these rights by the United Nations, organized by Captain Cousteau, has now collected more than two million signatures in France alone and is increasing at the rate of 50,000 per week.

The Captain was given a hero's welcome by the enchanted children taking part in the afternoon's events at UNESCO. Their squeals of delight and cries of *"we love you Captain Cousteau"* echoed around UNESCO's usually austere walls provoking smiles all round. Their excitement was nonetheless tempered by their concern and curiousity over the state of the environment and what must be done to stop the damage. The 81 year old Frenchman had their undivided attention as he answered their queries, explained concepts such as the greenhouse effect and ozone layer depletion, and stressed the important role that they could play in protecting the environment.

"Acting to keep your own environment clean is a good start. It sets the example , creates good habits and makes you think about the issues at hand."

One of the highlights of the afternoon was the performance by violonist Ivry Gitlis who put the Captain's name to music. *"Do-la-sol-mi-fa-mi-la-sol - spells Cousteau,"* he explained to the children who, in no time at all, had picked up the tune and sang along, accompanied by pianist Ana Maria Vera. The Cousteau team had also prepared a special film for the young audience showing the different ways in which the environment is being ravaged and introducing them to children in other areas of the world who are already suffering from the consequences of desertification, overpopulation and poverty.

FRANCE'S BEST LOVED AMBASSADOR WITH FEDERICO MAYOR (Photo UNESCO/M. Claude).

Cousteau has appealed to UNESCO to ensure that the results of next month's United Nations Conference on the Environment and Development be reported to the world's children to keep them up to date and involved on developments - an undertaking that was solemnly accepted by Director General Federico Mayor.

S. W.

● **JAVIER PEREZ DE CUELLAR**, former United Nations Secretary-General, has agreed to chair the World Commission on Culture and Development. Mr. Perez de Cuellar, 72, of Peru, retired last December from the post he had held since 1982. Created at the initiative of UNESCO, but fully independent, the Commission will begin work in the next few months. After three years of hearings, it will prepare a policy-oriented report on how cultural sensitivities can better be taken into account in social and economic development. Since the launching of the World Decade for Cultural Development in 1988, UNESCO has promoted scores of projects to showcase the critical importance of the cultural dimension of development.

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WHAT ON EARTH'S THE MATTER?

THE RIO CONFERENCE

The greenhouse effect, depletion of the ozone layer, deforestation, desertification: the facts are there, tangible, indisputable. Despite the evidence before our very eyes, we cannot bring about the changes necessary to halt or even slow down the damage. It's as if we did not want to see, hear or understand; as if we preferred to remain in ignorance rather than react. What a paradox!
On the eve of the UN Conference on the Environment and Development (Rio de Janeiro, June 3-14), this edition of Focus looks at some of the characteristics of this paradox, albeit modestly given the complexity of the subject and the multiplicity of opinions it has given rise to.
The core of the problem is presented by UNESCO's Coordinator for the Environment, Francesco di Castri (see below). The following articles underline its effects on the economy (p. 10), culture (p. 11), and research (p. 14), and show what we can expect if we don't act (pp. 12-13). Mexican environmentalist Gonzalo Halffter presents his viewpoint (p. 9) and the dossier closes with an overview of UNESCO's efforts in this domain, and the obstacles it faces in trying to get the message across (pp. 15-16).

The degradation of the planet's environment is accelerating. It has been estimated that 10 to 20 million hectares of forest - an area five times the size of Belgium - are destroyed each year, while another six million hectares of arable land turn into desert. Whole species vanish and ecosystems are destroyed at a dizzying pace, shrinking the earth's genetic capital before when we have even explored all of its resources.

For the first time in history, human deeds have an impact that goes beyond local boundaries and encompasses the globe: witness, for example, climatic changes caused by the greenhouse effect. And such changes could well prove irreversible.

The human factors accounting for the worsening of our environment are known. Foremost among them are the world's demographic explosion - the population of the Third World will have quadrupled between 1950 and 2025 - the damaging consequences of global manufacturing and consumerism, and the inability of our existing forms of government and social practices to resolve such problems. These human factors are all linked; unsustainable development and the environmental crisis are but two sides of the same coin.

The physical phenomena involved, be they local or worldwide, are increasingly understood by scientists. Today, these phenomena can be forecast with enough accuracy to set the alarm bells ringing. Changing climatic patterns, for example, could lead to rising temperatures and sea levels which, in turn would modify the agricultural potential of entire regions, submerge hundreds of thousands of square kilometers of coastal areas - where three-quarters of the world's population live today - and disrupt, maybe ruin, the lives of millions.

PARADOX

Humanity is therefore living with a paradox: it is certain that apathy or sporadic and incoherent explosions of activity, will lead us to catastrophe, yet this certainty does not rid us of our impotence and paralysis. This paradox, at the heart of the environmental crisis, is so acute that it can't be explained by circumstantial factors, such as lack of funds, but rather by structural problems.

If paralysis stems from ignorance of the accumulating risks, the environmental crisis then reveals tremendous inefficiency in research methods and/or communication of knowledge.

Environmental problems completely ignore borders, whether they be between nations or scientific disciplines: interdisciplinary approaches, involving not only natural sciences but also social sciences, and cooperation among communities of scientists throughout the world are the only way that environmental research can leap ahead. Yet scientists who want to work like this are faced with major obstacles. Specialization and compartimentalization too often confine them to specific structures. And if they are willing to overlook such barriers, their research will be more arduous, successes given less recognition and their careers undermined.

Furthermore, each day uncovers new and more complex problems in our environment, making its evolution ever more unpredictable. Scientific thought and institutions - non-scientific too, for that matter--do not function well in such conditions. They have always thrived on stability and "linear predictions," rather than rupture, surprises, and sudden shifts in direction.

A further issue is that the accumulated body of knowledge is not adequately conveyed either to decision-makers or to the public at large--particularly by the media. Neither is it transmitted to the young

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through education, the environment being a marginal or insignificant concern in school systems. Along the way from a discovery to its practical application and popularization, the lines of communication get obstructed, each step a bottleneck through which information loses substance and relevance. The main reason is isolation; a kind of corporate mentality that renders impermeable research, politics, economics, and education.

If the current paralysis is due to indifference, then the environmental crisis sustains itself on a mix of blindness and selfishness. This despite the knowledge that sooner or later, wherever we live, the crisis will reach us, though not all equally. This attitude points to a mental block, a refusal to accept for ourselves the consequences of this crisis. There is blindness when we allow ourselves to believe that humanity is now above nature thanks to science, which we assume will solve everything. There is selfishness when we believe in "everyone for themselves", when we dissociate the individual and the collective, the regional and the worldwide, and in particular the north from the south.

$500 BILLION ANNUALLY

The income gap between industrialized and developing countries has become a yawning chasm; at the turn of the century the ratio was one to two, in the '50s one to 30 and today one to 50. Ninety-five percent of all scientific and technical capacity is concentrated in northern countries. According to a recent study by the United Nations Development Program (UNDP), northern countries' blocks to free trade - a crucial element in world economy - deprive the south of at least $500 billion each year, 10 times the sum it gets in foreign aid.

The widening of the north-south gap is not only ethically unacceptable, it is also in the long term senseless economically, eminently dangerous geopolitically, and disastrous environmentally as it increases pressure on the environment in the south (through deforestation, desertification, urbanization, etc.) and, by extension, in the north. The latter cannot hide in a fortress whose walls would curb the flow of the millions of destitute southerners attracted by the wealth of the north, or would isolate it from the developing countries' environmental upheavals.

If, in the end, our impotence is the cause of the environmental crisis, then this reveals another crisis in our institutions, one that forces us to challenge their grasp of space and time, as well as the way they function and interact.

We should first challenge their grasp of space, because even though societies are becoming increasingly interdependent - and a global village is gradually emerging - and even though the origins as well as the consequences of the environmental crisis have worldwide dimensions, the planet is still divided into nation-states. And none of these countries, powerful as they may be, can solve the crisis by themselves. This division and the sovereignty of each state thwart any effort that could be made on a planetary level. At the same time, new local identities (regional, ethnic, etc.) arise on territories that do not necessarily reflect actual borders. Too often, the state ignores such awakenings because of its remoteness and/or opposes it with centralized willpower.

Yet it is precisely among such newly formed human and geographical identities that ecological dynamism is most promising. In a word the nation-state, globally or locally, seems out-of-step.

Grasp of space again, because defense of the territory is not only a matter of geography. Institutional "culture," inside of a country as well as outside, prompts the construction and defense of a clearly delineated zone of activity surrounded by totally impervious borders. This institutional logic is diametrically opposed to the kind of thinking required by environmental management: lasting interrelationships among all institutions, whatever their type, whether concerned with government, production or knowledge.

All large public institutions having barely changed in the last 50 years, we should challenge their grasp of time. Asked by political authorities to pursue short-term results, they cannot deal with the long-term priorities dictated by environmental action.

Finally we should also question the way our institutions function: the mental attitudes and mechanisms that pervade them are often quite removed from the inventiveness, flexibility, and openness essential to environmental action and development.

THE COMMON DESTINY OF HUMANITY

There lies the core of the crisis. Its analysis unveils many antagonisms: between, for example, the individual and the collective, nation and planet, north and south, isolation or interaction, selfishness or solidarity, specialization or interdisciplinarity, short term or long term, inaction or action, the linear or the unpredictable....

If we had to summarize all these thorny issues into one fundamental conflict, it would be the one that opposes the common destiny of humanity to divisions that riddle our societies; the predominance of verticality--synonymous with hierarchy and segmentation--against the need for horizontality--denoting conviviality and interaction.

Tackling this central conflict goes far beyond the issue of what means we have at our disposal. It requires us to reexamine and radically modify our ways of thinking and living, our modes of production and exchange, and the purpose and operation of all the mechanisms by which humanity is governed. It entails no less than a cultural revolution.

The scope of that task should not frighten us, much less paralyze us, because we do not have any other choice but to pursue it. Also because the essential paradox that this article has tried to clarify has now reached such a crucial stage that vast avenues have opened up for invention, social interaction, responsibility: liberty and hope beckon us. There can be, for each of us, the exaltation being part of a new Renaissance.

Francesco DI CASTRI

A NEW ENVIRONMENTAL CONSCIOUSNESS

Gonzalo Halffter helps push the environment into the public spotlight - and onto the political agenda - in Mexico

Nothing in life is free. And Gonzalo Halffter, one of Mexico's leading ecologists, is forever reminding people of the price that must be paid for a healthy environment. It's folly to believe that science alone can resolve the environmental crisis, he says.

His experience as a biologist, academic and research director at Mexico's National Polytechnic Institute and finally director of the Ecology Institute has made Halffter a cautious pragmatist; everything has a price, and saving the environment is no different. But what price are we willing to pay?

"How are we going to deal with the problem of global change without the discipline it takes to stop wasting energy?" he asks.

And what is true on a global level also holds for local communities. The eight-kilometre road leading from Halffter's home to the Institute outside Xalapa is constantly littered with garbage bags which fall from passing garbage trucks. A problem to be solved with state-of-the-art technology or money? *"Hardly. We just need to put plastic barriers on the trucks to keep bags from tumbling off,"* Halffter said. *"But the city government doesn't want to take the risk of punishing those who break the law."*

Despite these attitudes, things are changing in Mexico and throughout Latin America, and a new environmental consciousness is the leitmotif.

It was to foster this evolution that Halffter created the Ecology Institute in 1975. Seventy-five percent funded by public money, the autonomous institute has become one of the most important environmental monitoring organizations in Latin America. Its 1992 budget is set at some seven million dollars coming from both private donors and international bodies.

One of its key tasks is to carry out on site environmental impact studies prior to implementation of government and industrial projects.

"Twenty-five years ago it was all but impossible to convince decision-makers of the need to protect the environment," he says. But things have changed, and one of the most revealing examples was the passage in Mexico of in the late 1980s of a *"general law of ecological equilibrium"*. The legislation, the most ambitious on the continent, was inspired by work in two environmental reserves managed by the Ecology Institute under UNESCO's Man and the Biosphere Programme (MAB).

(Photo UNESCO/Jose Forbat)

Gonzalo Halffter has contributed to MAB since its inception, and served at one point as its president.

The guiding idea behind the reserves is to marry the protection of nature with concern for the local population. *"There was a time when the major concern in establishing a nature reserve was how to get rid of its human inhabitants,"* said Halffter. *"We saw human beings as being hostile to the environment by their very nature. Now, on the contrary, we think you have to promote human presence, while, of course, controlling its development."*

Halffter plays down the obstacles standing in the way of implementing the new legislation. *"It's a truly positive and all-encompassing law, but now we have to apply it,"* he said.

Halffter is optimistic that the State can and will help to protect the environment rather than just maintaining the status quo. *"Of course, the State is sensitive to the economic and social interests of a rich minority. But do you think environmental destruction is really in the interests of the bourgeoisie?"* he asks. *"It is in no-one's interest. The key is that people become conscious of the problem."* The main obstacles, in his view, are socio-economic problems: *"It is difficult to talk about environmental consciousness to people who are hungry,"* he says.

A POLITICAL RISK

The fact that so many roads have been built without going to the trouble of carrying out environmental impact studies, he continues, is not so much the fault of governments as of a certain *"mentality"* or *"view of development"* that had to be overcome: the idea that *"destroying a forest signalled the arrival of civilization"*. But today, he says, ignoring the environment has become a political risk for government leaders. *"If they cannot respond to the kinds of problems which arise in the day-to-day life of their citizens they are taking risks."* And in his opinion, governments do have the means at their disposal to deal with the problem, especially aided by the *"formidable stimulus"* represented by Latin America's academic institutions and their interest in saving the environment.

And so there is hope? *"At the very least, there is an interest in the environment,"* he says cautiously.

And in Mexico this interest is all the more important given the dramatic pollution problems facing the country. Mexico City is one of the world's largest and most polluted cities. And the problem of adequate drinking water is becoming increasingly severe. *"Not to mention,"* he adds *"the recent tragedy at Guadalajara ... the result of development policies that permitted the construction of dangerous factories in the city."*

These factors have led to a much sharper perception of the fragility of the environment. *"Pollution has become the main topic of conversation among residents of the capital"* he said.

However, the 59 year-old activist admits frustration at the *"limited ability of intellectuals to have an impact on reality"*. *"Ideas have an influence only when a critical point has been reached,"* he sighs.

Nicolas MICHAUX and Carlos FAZIO in Mexico

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ECOLOGICAL ECONOMICS

What effect has the globalization of economy and liberalism had on the environment? Three specialists answer

The present behavior of the world economy is not conducive to protecting the environment," says Carl Folke of the Royal Swedish Academy of Sciences. *"Simply because most economic activities are what ecological economists refer to as 'throughput' based. This means that resources from large areas in nature are pumped into the human economy, and concentrated in industrial and urban centers. When the resources have been used up for economic purposes, either by the production process or by household consumption, they are returned to the environment as concentrated waste, toxins, and pollutants."* Examples abound, from *"depletion of minerals"* to *"overexploitation of fish populations."*

Thus one of the tenets suggested by "ecological economists" is known in their jargon as *"dematerialization,"* in other words giving priority to activities and techniques that consume fewer natural resources.

It is in that same direction that Robert Costanza, from the University of Maryland, thinks the development of the world economy should proceed, *"using resources at a sustainable level"*. To that effect, he gives the example of the timber industry, which *"favors the growth of trade but not the development of either the importing or exporting country"*. For in some regions, timber has been exploited far beyond the renewal capacity of the forests. In the long term, therefore, there is no more wood, no more exploitation, and no trade, which means no money for the producing countries and no goods for the importing countries.

SWITCHING PERSPECTIVES

The last thing that should be done is to *"let the market go"*. The market must be used as *"a tool to achieve the goals of sustainable development"*.

Moreover, *"there is no free market since any market acts within the value context of the society, the culture of which it is a part,"* adds Folke.

In short, he believes we must *"switch our perspectives"* from economic policies based on *"infinite physical growth on a limited planet earth."* Ecological economists also insist on the distinction between purely quantitative *"growth,"* and *"development,"* which is qualitative.

"Pollution makes a mockery of national borders, and economies being increasingly interconnected, the ecological answer should be on a global scale," says Costanza.

But how can we help change the course of world trade and production? Costanza suggests a fiscal revolution. *"Take CFC,"* the gas found in aerosols and refrigerators that is partly responsible for the hole in the ozone layer. *"We chose to ban CFC. Why not? But we could have taxed CFC production at a very high rate, thus discouraging its use. It would have been as effective."*

Beyond that, it would also be possible to introduce a *"natural capital depletion tax"*. In other words the more natural resources a product consumes, the more expensive it would be. *"Resources could thus be conserved for future generations and industry would be prodded into enacting the technical changes necessary"* in finding substitutes to overexploitation of natural resources.

ENVIRONMENTAL INSURANCE

Taking into account a degree of uncertainty in the effects of our economic system, Costanza also suggests a *"refundable assurance bonding system"*: a company would need to put money aside according to the most pessimistic predictions of the impact its activity would have on the environment. If such predictions did not come true, or half materialized, the company would then get its *"insurance"* money back.

Says Costanza, *"It would most likely require international agreements"* for such a system to function. *"The political feasibility of this policy is an important and very difficult question."*

The same obstacle exists in the struggle against the south's underdevelopment, which is acknowledged as an increasing factor of pollution. But the author of the UNDP report on *"human development,"* Mahbub ul Haq, Pakistan's former finance minister, calculates that obstructed and protected markets cost the Third World $500 billion a year. That sum is 10 times the amount of foreign aid allocated to underdeveloped countries. *"Rich countries will not be able to protect their standards of living if they do nothing for this vast bantustan in which they want to lock the Third World,"* Ul Haq says in a recent interview published in the French magazine "Croissance". *"It is therefore out of personal gain rather than out of ethical concerns that they will act."* He advises founding a *"security council for development"* that would take *"ecological safety"* into consideration. And this form of world government could *"have control over various mechanisms to reduce the disparities between rich and poor,"* as northern nations do.

Economics, according to Costanza, is a topsy-turvy science. Consider, he says, the way we calculate Gross National Product (GNP), which is fundamental to all economic statistics. *"For example, a standing forest provides real economic services for people: by conserving soil, cleaning air and water, providing habitat for wildlife, and supporting recreational activities. But as GNP is currently figured, only the value of harvested timber is calculated in the total."*

Getting economic figures out of nature, however, is not simple, as Costanza admits. How, for example, do we calculate the price of a swamp?

Nicolas MICHAUX

CHANGING BAD HABITS

Solving our environmental problems is not just a question of money and legislation - it requires no less than a cultural revolution

The modern Parisian no longer has two feet but four wheels"... quipped one of the city's police chiefs on a recent French radio programme. His comment stands valid for the residents of any city in the industrialized world, where two and three car families are the norm rather than the exception. And production continues to increase. The number of cars on French roads for example, climbed from 20.6 million in 1983 to 23 million in 1989. The automobile is the trademark, par excellence, of modern society and its capacity to waste resources and poison the air we breathe. According to OECD, figures motor vehicles in the United States alone spew some 40 million tonnes of carbon monoxide into the atmosphere each year. Despite this we would not think of giving them up ... or taking the train.

At least, it can be argued, the rich industrialized world has the means to develop more "environmentally-friendly" technology if pushed to do so. The choices are far more limited and complex for developing and predominantly rural societies. Practices such as pastoral nomadism or slash and burn agriculture that for centuries have had relatively little impact on the environment are now proving extremely damaging. This is due mainly to the additional pressures on limited resources caused by rapidly growing populations and poverty. A study carried out by the Food and Agriculture Organization estimates, for example, that slash and burn agriculture alone is responsible for 70% of the deforestation that has occurred in Africa, 50% in Asia and 35% in Latin America.

OVERHAULING THE SYSTEM

Obviously, any serious attempt to protect the environment and promote sustainable development also means an overhaul of social and cultural practices and values in both modern consumer and traditional societies. But this will undoubtedly prove to be the most difficult step of all.

According to Lennart Sjöberg from the Centre for Risk Research in Stockholm, environmental problems can be compared with smoking and excessive alcohol consumption. *"Such behaviour is known to be detrimental to health, but many people still adopt it. In this sense the problems are psychological,"* he argues in 'Global change and human action' (*International Social Science Journal, No.121, Basil Blackwell/UNESCO, August 1989*). *"Related examples in the environmental area are not hard to find,"* he continues. *"(In the U.S) it has been found that people pay lip-service to environmental protection but only 10-15% participate in recycling programmes, for example. Participation in energy conservation programmes was found to be as low as five per cent on the average... (while) car pooling schemes have not been very successful. After an initial flurry of enthusiasm people find that they really do not want to sacrifice time and comfort."*

This resistance, argues Sjöberg, could arise from the fact that *"the individual may perceive minimal influence over events"*. On the other hand, he continues, *"individuals may even profit from certain actions while everyone suffers if all adopt them - sometimes called 'the tragedy of the commons'. If everyone exploits a share of collective resources, short-run profit accrues, while the common resource is gradually destroyed and ultimately all lose."* An example of this can be found throughout Africa where, says French agronomist René Dumont, *"all that grows without human interference, such as grass and trees, belongs to everyone and where no-one worries about protecting these resources efficiently and ensuring their continuation"*. Thus, more than 650,000 square kilometres of land in Africa's Sahel region has become desert over the past 50 years, due largely to overgrazing and farming techniques that are no longer sustainable on impoverished land which is asked to produce more and more...

NOT A PRIORITY

Clearly, survival is here the prime motivation and the techniques used are those based on traditional knowledge. The protection of natural resources is not consciously considered, or given priority.

A similar situation exists in Laos where, according to French researcher Michel Gutelman, slash and burn agriculture destroys some 250,000 to 300,000 hectares of forest, or *"in economic terms $900m of wood"*, annually. Ecologically sound and more productive techniques were developed for the local situation and successfully tested by research teams there, however the local peasants have shown little interest. Gutelman puts this failure down to the material difficulties (insufficient labour and financial means) of transition as well as psychological and social reasons, including incomprehension. *"For subsistance or semi-subsistance farmers, the cultivation of leguminous plants that are not grown to be eaten but rather turned back into the soil, can be considered an aberration. It can only be accepted if the grower understands the role of humus and organic azote in the maintenance of soil fertility."*

Getting the message through that human societies must change their habits is not going to happen overnight. Nor, argues Sjöberg, are they likely to be much affected by mass media campaigns. *"Concrete personal experience and hearsay from credible friends and neighbours"* produces greater effects *"as a rule"* contends the Swede. Does that mean that we need an environmental disaster of unprecedented scale to provide us with the necessary experience and jolt us into action?

Sue WILLIAMS

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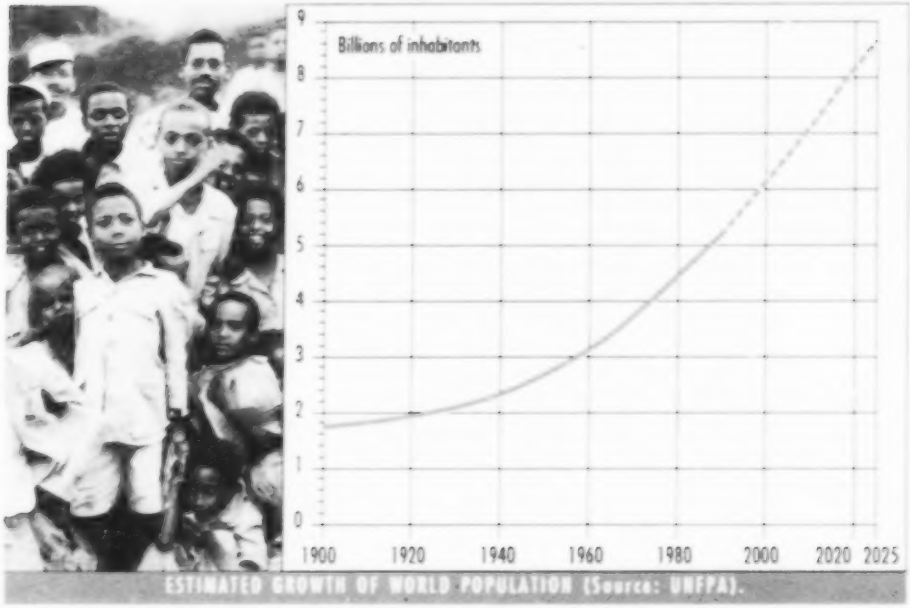
A WORD OF WARMING!

Carbon dioxide (CO_2), chlorofluorocarbons (CFCs) and nitrous oxide emissions in the atmosphere "trap" infra-red (hot) radiation emitted by the sun and reflected by the Earth. Human activities are

THE POPULATION EXPLOSION

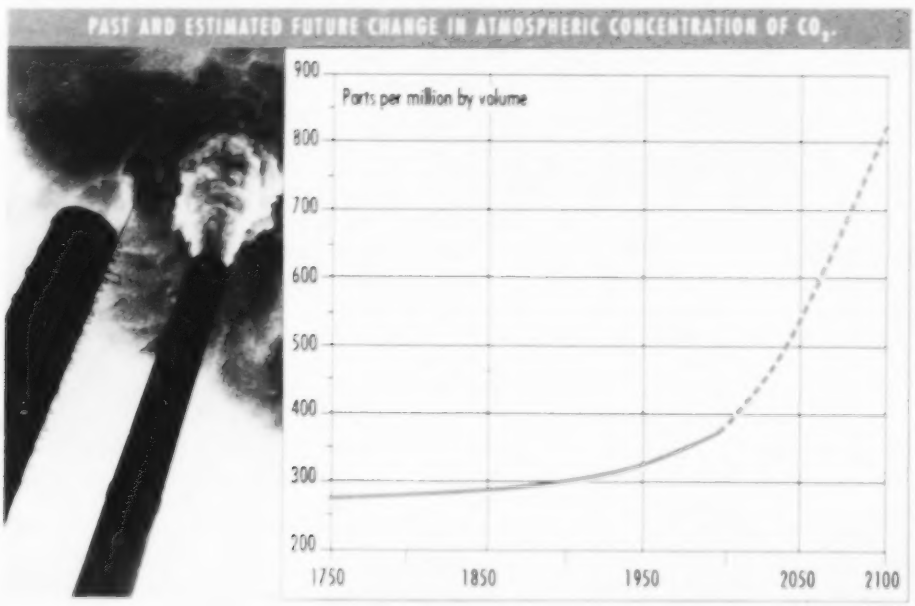


ESTIMATED GROWTH OF WORLD POPULATION (Source: UNFPA).

The combustion of fossil fuels (petroleum and coal), which each year releases about six billion tons of carbon dioxide, and deforestation, which releases about two billion, are responsible for about half of the greenhouse effect caused by human activity. More recently, the chlorofluorocarbons (especially those used for aerosols and refrigerators) are responsible for about one quarter, and methane for just under one-sixth.

As world population increases, so do emissions of gases because of production and consumption patterns in the industrialized countries and/or the acceleration of deforestation.

CARBON DIOXIDE IN THE ATMOSPHERE



PAST AND ESTIMATED FUTURE CHANGE IN ATMOSPHERIC CONCENTRATION OF CO_2.

This graph indicates the atmospheric concentration of carbon dioxide since the beginning of the industrial revolution, measured in parts per million by volume (ppmv). Projections through the year 2100 are based on the hypothesis (the worst) that nothing or very little will be done to limit carbon dioxide emissions contributing to the greenhouse effect.

N.B. Graphs and explanatory texts are taken from *Climate Change*, the Report of Working Group 1 of the Intergovernmental Panel on Climate Change sponsored jointly by the World Meteorological Organization (WMO) and the UN Environment Programme (UNEP).

Graphics: A. Darmon

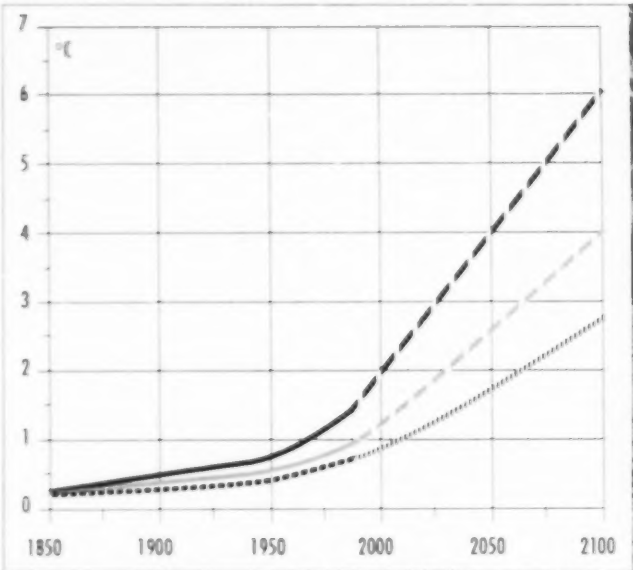
substantially increasing the concentration of these gases, which will in turn intensify the so-called "greenhouse effect", resulting on average in an additional warming of the Earth's surface.

INCREASE IN GLOBAL MEAN TEMPERATURE

Enhancement of the greenhouse effect will result in global warming, especially since the phenomenon favourizes emissions of water vapour which, in turn, intensify the effect.

This graph simulates the increase in mean temperature due to the greenhouse effect (low, best and high estimates), using 1765 as base year.

According to these predictions, the rate of increase of global mean temperature during the next century is estimated at about 0.3°C per decade, or about 1°C above the present value by the year 2025, in other words a rate of change over 30 years which is greater than that of the last 10,000 years.



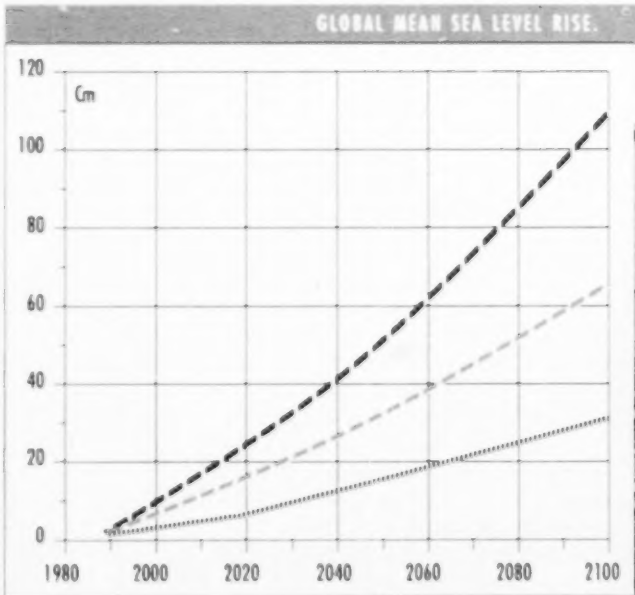
INCREASE IN GLOBAL MEAN TEMPERATURE.

GLOBAL MEAN SEA LEVEL RISE

Global warming will also cause the oceans to dilate and glaciers, particularly polar, to melt: this graph indicates a sea level rise, also using high, low and best-estimates. An average rate of global mean sea level rise of about 6 cm per decade or 60 cm by the end of the next century.

Two important remarks: at current levels of knowledge, these predictions of both temperature and sea level rise are subject to major scientific uncertainties and wide local variations; these changes may, indeed, be due largely to "natural variations". Prevention, however, is better than cure.

GLOBAL MEAN SEA LEVEL RISE.



UP IN THE IVORY TOWERS

Can present research and university structures deal with the unforeseeable? UNESCO's coordinator for the environment, Francesco di Castri has a few doubts

How would we go about improving trade, in future decades, between two French cities thirty miles from each other? The question was put to a group of public-works engineers. Taking into account a predictable increase in traffic, they suggested laying down new highways. A logical answer: trained to build roads, they could only think in terms of creating new ones, without anticipating the collateral effects of such an absurd growth. None recommended exploring, for example, the benefits of public transportation.

This anecdote reveals one of the major obstacles to long-term action in preserving the environment: if there is an institution responsible for the preparation of future generations, and particularly executives, for such action - and that at the same time seems unprepared for the task - it is indeed the university structure.

Whereas study and management of the environment calls for interdisciplinary methods, the university structure is globally regulated by boundaries delineating disciplines, corporations, and institutions. Partitioned higher education leads straight to partitioned institutions, and in the end confines thought itself. The golden rule is indeed specialization. Rare instances aside, a researcher had better adapt to specialized thinking and academic division: becoming a recognized specialist in anyone field offers more security and benefits. For 20 years, the specialist studies not a particular problem but a specific fraction of that problem, not bothering with more complex interference of unexpected consequences. The whole academic bureaucracy functions this way. Research and university funds are also disbursed according to such rigid divisions.

The whole system is based on two key concepts that are unsuitable for today's world: linear predictability and simplification. In other words academic and research institutions formulate linear projections without taking into account all the possible splits along the way. If demographic growth is considered linearly, world population would reach 30 billion at the end of the next century, which does not make sense. Countless factors can interfere with this simple projection, for example if all women in the Third World receive a better education, birth rates will fall. Such cultural factors - which are called "soft facts" as opposed to "hard facts" (measurable and quantifiable) - are greatly undervalued, even ignored altogether, by scientists. All evolution is subject to radical shifts, reversals, or acceleration. In terms of the environment as in development, evolution does not conform to simple cause and effect relationships. Myriad elements intervene to various degrees in time with differing effects, and one cannot tell which will prevail at any given moment.

It is true, however, that interdisciplinary research suffers from a bad reputation, because it has often lacked in scientific rigour or realistic objectives. But interdisciplinary does not mean no discipline. In no way should highly specialized fields be altogether excluded; rather, they should be combined with a better grasp of general knowledge.

THEORIZING THE UNFORESEEABLE

Environmental research is also complicated by the difficulty, if not outright impossibility, of experimentation. When effects are visible, it is often too late to do anything. Unpredictability, a consequence of irreducible complexity, gives rise to a fundamental question: how can we master the unknown? Scientists (and political leaders even less) do not like uncertainty. But uncertainty should not be an excuse for inaction because we must also consider the irreversible nature of environmental issues.

A revolution in not only structures but also mental attitudes is therefore needed. We should prepare scholars and scientists for the study of complex systems integrating the discontinuity and unpredictability of scientific procedures. There is talk about *"theorizing the unforeseeable"* or *"moving targets,"* which should be added to scientific education. We should also break down the dividing lines among disciplines for it will not be possible to train all-knowing superspecialists of the environment: each will have to open his or her field up to the whole.

Large corporations can perhaps provide universities with an example. The most successful are structured so as to favour internal and external communication, adapt quickly and yet have long-term plans: in the automobile industry, for example, strategies are being developed to cope with the eventual demise of cars as we know them.

Education must similarly proceed, otherwise today's children will be tomorrow's incompetent adults. That's the price we have to pay to give them a chance in confronting the environmental crisis.

Francesco DI CASTRI
UNESCO Coordinator for the Environment

A WORLDWIDE SYNERGY

UNESCO's scientific programmes "put together all the pieces of the puzzle"

We're not doing any research ourselves, but we help with research at an international level. We don't have any laboratories of our own, yet we work with the best labs in the world. We don't teach, but thanks to us knowledge gets around." Andras Szollosi-Nagy, head of UNESCO's International Hydrological Programme (IHP), wants to avoid any misunderstanding: even though he is trained as a scientist and his work deals with science, he is first and foremost a *"scientific manager."* A term that applies as well to his colleagues working for the other three international scientific programmes at UNESCO: the Man and Biosphere programme (MAB), the Intergovernmental Oceanographic Commission (IOC), and the International Geological Correlation Programme (IGCP).

"We achieve a worldwide synergy of local research," says MAB Director Berndt Von Droste. Synergy is the key word in the role played by UNESCO with these programmes. They offer (but do not impose) procedures on which scientists in distant labs can rely to work effectively as a global team. These procedures thus help researchers in prioritizing their activities on a worldwide scale, in dividing up tasks according to each team's strengths, and in coordinating the projects, making information and results available to all. In diplomatic jargon, this is *"international intellectual cooperation."* For Szollosi-Nagy, it is more simply a way to *"put together all the pieces of the puzzle and get a global picture."*

GOING GLOBAL

With the worldwide impact of environmental problems such as pollution, the greenhouse effect, climatic changes, and urbanization, the concept of working together on a global scale seems obvious today. At the time UNESCO's international programmes got under way, however, this idea had little weight. In particular, the south was then kept out of major scientific developments, most of the research capacity being concentrated in the north. One of the great merits of UNESCO's programmes lies in links build between North and South - and, little by little, between South and South - by adding Third World scientists to their endeavors, by helping in the development of science in the South, and especially by making significant efforts in local training.

Innovating in new fields went along with this extended geographical reach: the MAB, IOC, IHP, and IGCP programmes have been pioneers in the study of tropical ecosystems, which were until then little known even though three-quarters of the world's population live there. Similar ground-breaking studies are carried out in desert areas, and on the relationships between the environment and cities swollen by rural migration. Indeed, UNESCO's four major scientific programmes do not conduct research for its own sake, be it on the biosphere (MAB), the ocean (IOC), fresh waters (IHP), or the earth's crust (IGCP), but rather with the aim of improving humanity's condition. Their interdisciplinary character is emphasized further by UNESCO's charter, integrating science, education, and culture. Thus UNESCO has played a leading role in putting the concept of sustainable development forward in international forums.

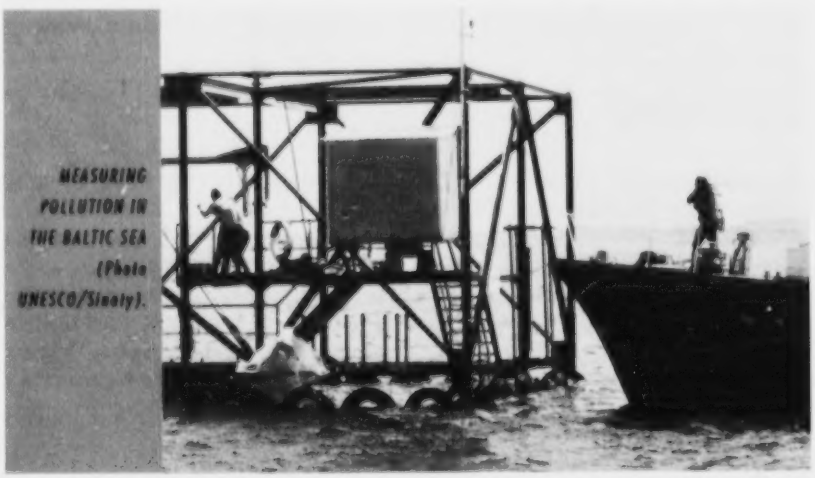
The programmes have proved successful. For example, more than four out of five laboratories throughout the world dealing with issues concerning water cooperate with IHP, and the ratio is one out of two in cases involving MAB or IOC. But should this success be taken for granted? Revolutionary as such programmes may have been twenty or thirty years ago, might they not become outdated, even superfluous?

Their budgets are compared to what is at stakes, extremely modest: UNESCO awards them about $5 million a year, to which is added about $25 million in voluntary contributions from other organizations and Member States. Yet their worldwide scope is an asset that no other network holds.

For the programme Director, as with the International Council of Scientific Unions - the largest non-governmental body in this field - their *inter*governmental feature is their *"main strength"*: an irreplaceable feature that *"connects the scientific engine with the political machine."* But intergovernmental means heavy bureaucracy, making it at the same time an obvious weakness.

The fact that many others have now followed the lead set by UNESCO's programmes is a welcome development. Faced with today's environmental crisis, shouldn't international networks forge new ecological alliances, each focussing on what they can do best, and thereby ensuring greater efficiency? Are interdisciplinary methods sufficiently established and validated within and among these programmes, or adequately tied to social sciences, culture, and education? As the Earth Summit is taking place, the question is how these programmes should evolve to embrace the "revolution" needed in all our institutions to confront the degradation of our environment.

René LEFORT



MEASURING POLLUTION IN THE BALTIC SEA (Photo UNESCO/Sinaly).

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TOWARDS RESPONSIBLE CITIZENSHIP

UNESCO and UNEP join forces to promote environmental education - the key to a healthier planet

The need for environmental education was clearly recognized back in 1972 at the UN Conference on the Human Environment in Stockholm. In response to the Conference recommendations, UNESCO and the United Nations Environment Programme (UNEP) jointly launched the International Environmental Education Programme (IEEP) in 1975. A bluprint for action was drawn up at an international conference in Tbilisi (Georgia) two years later and the programme has been expanding ever since. To date, over 150 countries have become involved in various IEEP activities such as teacher education, curriculum and material development, educational planning and information exchange, while some 15,000 individuals and institutions around the world receive the Programme's newsletter "Connect" in six languages.

DEVELOPING AWARENESS

The main aim is to develop awareness of the need for environmental education and develop concepts and methodological approaches to its teaching; how teachers, for example can translate into simple language such complex concepts and phenomena as interdependence, non-renewable resources, energy flow and ozone layer depletion.

As a result of the programme's efforts, 95 countries have adopted, or are about to do so, environmental education as a key component of formal or non-formal education. Costa Rica, Venezuela and India, for example, have recently made it mandatory for all educational institutions to incorporate an environmental dimension into all education programmes from pre-primary up to and including primary level. Turkey is developing a national environmental education plan based on the principle that environmental education should be a lifelong concern of everyone, from policy makers and economists to fishermen and farmers. In some schools, Bangladeshi children are learning in outdoor classrooms in order to boost their environmental sensitivity and respect for nature.

However, as the vast majority of the world's population is outside the school system, non-formal education takes on a special importance. And there, non-governmental organizations have been instrumental in implementing IEEP activities. The Programme is now turning its attention to the development of educational materials directed towards decision makers in government and private industry, as well as the commercial, agricultural and service sectors.

Despite some impressive results, however, more than a decade has passed since the Tbilisi Charter was adopted and not a single country has achieved all of the goals it laid down. This has been largely attributed to a lack of follow-up by Member States to projects undertaken within the IEEP framework, the inertia of existing education systems and inadequate budgets. Greater commitment and flexibility is required from governments and educational authorites if these problems are to be overcome and the Programme's aims fulfilled. *"Responsible citizenship can be developed through environmental education,"* say experts Harold R. Hungerford and Trudi L. Volk, who have been involved in several IEEP initiatives. *"The strategies are known. The tools are available. The real challenge lies in a willingness to do things differently."* ■

TO FIND OUT MORE ...

ENVIRONMENTALLY SUSTAINABLE ECONOMIC DEVELOPMENT: BUILDING ON BRUNDTLAND - presents a series of articles by internationally renowned specialists supporting the case for transition to a sustainable world and suggesting how this can be achieved. UNESCO, 1991.

MAN AND THE BIOSPHERE SERIES - a 15-volume series presenting some of the central findings of the 15-year MAB research programme focussing on the way in which many environmental factors are intermeshed with social and economic processes. Among the eight titles published so are "Biohistory: the interplay between human society and the biosphere", "Exploiting the tropical rainforest" and "Sustainable development and environmental management of small islands".

ENVIRONMENT AND DEVELOPMENT BRIEFS - this series is intended to improve the communication of scientific information. Addressed primarily to decision-makers, it provides a readable over-view of global issues in this area. Each brief focusses on a single theme such as Debt-for-Nature Exchanges, Ground Water and New Technologies.

FEEDING TOMORROW'S WORLD - by Albert Sasson for teachers and the general public, this 800-page volume deals with the most recent information relating to the current state of food and nutrition of human populations. It also treats, in detail, environmental and economic factors that influence food production and consumption patterns, presents a series of case studies and looks at prospects for the future. UNESCO, 1990.

FOOD AND NUTRITION IN THE AFRICAN RAIN FOREST - a synthesis of the nutritional patterns of African forest peoples aimed at enhancing the perception of the cultural heritage of these peoples, while emphasizing the conservation of natural resources. UNESCO/MAB, 1990.

BIOSPHERE RESERVES - an informative brochure and poster explaining the functions of the biosphere reserves and incorporating a world map which shows the location of biosphere reserve sites.

MAN: THE KEY TO CONSERVATION - a slide-tape programme comprising 55 colour slides, a 20-minute cassette and a booklet containing the script and instructions for use. The programme presents different aspects of the MAB Programme along with the international Biosphere Reserve network and its functions.

PAPETERIES MATUSSIERE ET FOREST

BENT ON EXCELLENCE WITH ENVIRONMENTAL SAFETY AN OVERRIDING CONCERN

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CAP HORN

CHILDREN OF WAR

UNESCO launches an emergency education programme for the youngest victims of Angola's civil war

The civil war that ravaged Angola for 16 years formally ended with the signing of the Estoril accords in Portugal last year by the Movement for the Liberation of Angola (MLA), which alone held the reins of power, and the opposition National Union for Total Independence of Angola (UNITA).

Even though many unknowns remain about the political evolution of the country, businessmen have already begun coming back to the capital, Luanda, whose hotel capacity has visibly increased. The best hotel in town is booked up months in advance. On the market front, stocks of a wider variety of goods have improved as well.

Still, piles of trash continue to pollute the streets of Luanda. The demobilization of about 220,000 soldiers has fed unemployment and crime. Throughout the country, infrastructures have been critically hit by civil war and neglect.

Damages resulting from the conflict have been estimated at more than $20 billion. In one way or another, more than 1.5 million people have been affected.

Children were, of course, not spared. UNICEF estimates that the war has left 35,000 orphans in its wake, about as many "street kids," who lead a destitute life in the big cities, and more than 470,000 children whose parents fled their homes, losing everything they owned. It is estimated that a third of them are now trying to go back, leading to new problems of reinsertion.

AN URGENT CALL

Last July in Luanda, round-table talks on "education for all"—an extension to the worldwide conference on the same theme held in 1990 in Jomtien, Thailand—made an urgent call for *"the educational measures necessary to the social integration of handicapped children, orphans, street children, and other marginal youth."* In short, emergency measures are necessary to help these *"children of war."* UNESCO has risen to that challenge.

This is no easy task: the administration and the teaching corps lack funds, structure, and competence. More than a million school-age children (from six to 14 years old) must be brought to school. According to UNICEF the rate of school attendance barely tops 45 percent. To that should be added the fact that by the year 2000, the school system will have to absorb a million extra students.

A UNESCO report written in July 1991 underscores *"the inefficiency of the school system,"* brought about by *"teachers with no training and inadequate teaching tools, deficiency and degradation of the establishments, student poverty and no social aid"*. In the Lunda Norte province, to the country's northeast, there would be but one teacher for 65 students on average. *"The situation is probably no better today than it was in 1985, when it was evaluated that just 142 schoolchildren out of 1,000 succeeded in completing primary school [four years]."* And of these 142 students, 65 had to repeat a year at least twice. In a class ordinarily attended by five-year-olds, the majority would in fact be six or older, ranging up to 13 and 14 year-olds in some provinces.

For the situation varies considerably between regions. Nationally, for example, some 50 percent of children aged from six to nine attend school, but in some cases, such as Benguela or Namibe provinces, this figure climbs to 80 percent while in other provinces such as Huambo, Bié and Cuando Cubango, it falls to 35 percent. *"Such figures should be used cautiously, however,"* says Luis Tiburcio, a supervisor of the Angola/UNESCO cooperative programme on education. *"They may simply reflect the lack of statistical data in regions controlled by UNITA."*

Clearly though, action was required urgently. Says Tiburcio, *"In the field of education in particular, relief projects have to be rigorously organized, follow traditional stages, and wait until they have mobilized enough funds. But in this case we had to act at once."*

Thus UNESCO launched an emergency educational programme whose completion could take 18 months at a cost of about $19 million. This programme aims at the school integration of 45,000 children who had to take refuge in another province or who have returned home, as well as 5,000 orphans, 1,500 street kids, and 2,500 others who have been traumatized by violence. These latter comprise the handicapped but

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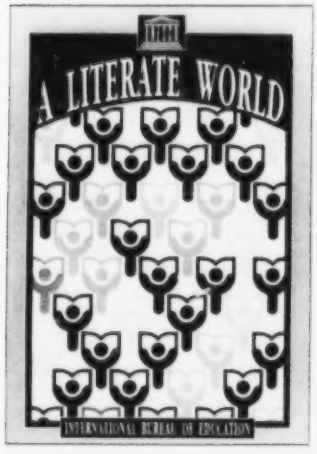
A LITERATE WORLD, published by UNESCO's International Bureau of Education, is a follow-up to the World Conference on Education for All held in Jomtien, Thailand in March 1990. Full of illustrations, the 31-page booklet analyses and defines literacy, linking it closely with poverty. To tackle the problem, along with functional



illiteracy, it describes universal primary education as the first line of attack. Other topics include ways for reaching the underprivileged, women and girls, motivating learners, etc. Written by John Fox and Jan Powell, **A Literate World** is available in English, French and Spanish.

☛ *International Bureau of Education*

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FORESTS AND BIODIVERSITY were the principal themes of "Ecoforêt 92", organized in collaboration with the French organization SILVA and the European Environmental Foundation at Headquarters on April 22. The event, a prelude to the UN Conference on Environment and Development, highlighted the French project "A l'Ecole de la Forêt", aimed at bringing forest problems into some 5,000 primary classrooms, and included a preview showing of "The Disappearing Forests," a film made for British Channel 4.

UNESCO SOURCES

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THE LIVES OF HALF A MILLION CHILDREN WERE DIRECTLY HIT BY THE 16-YEAR WAR (Photo UNICEF/ Alastair Matheson).

also those children who suffer from psychological instability and for whom, as the report stresses, *"we should as much as possible avoid creating specific structures that would tend to isolate them from the rest of society. We must on the contrary seek to integrate them into the programmes planned for the other children."*

LONG-TERM THINKING

The programme also seeks to establish "emergency funds" to help associations, churches, and specific public institutions in their educational efforts. Through their assistance, the goal is to come to the aid of some 10,000 youth and their families. In the end, as the emergency educational programme stresses, *"education is the only factor capable of creating a link between short-term humanitarian efforts and long-term strategies of human development."* It is therefore also suggested to start thinking about the long term by delivering technical assistance to build a complete educational reform on solid foundations.

The Angolan government has recently approved the principles of UNESCO's emergency plan. *"We must start phase one, as soon as funds begin coming in"* says Tiburcio, who anticipates that the first team will be able to start in Angola in June. The plan's development was made possible by funds totaling $200,000 from Portugal, which approves of the plan as well. Fund collection goes on, with the hope of dispelling the doubts of funding organizations about a country ravaged by war for so long. Portugal, maybe Italy, could make further contributions to the plan's execution and the project's managers have also turned to the EEC, the revolving presidency of which is currently held by Portugal.

Flexibility and speed are the key concepts of this operation, as Tiburcio describes it. *"To be efficient and act fast, we'll have to rely on structures already in place in the country,"* he says, advocating *"partnerships"* with organizations like UNICEF. *"People are fed up with war. Peace is marching on, we must give it a chance."*

Nicolas MICHAUX

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For the first time, the **CLOSING OF A SCHOOL** has been hailed as a step forward. The event: a Tanzania-based educational centre run by UNESCO for South African refugees closed its doors end March. As a result of developments in South Africa, including the unbanning of the African National Congress (ANC), most of the 2000 refugees at the Solomon Mahlangu Freedom College (SOMAFCO) in the Morogoro region have returned home. An orientation centre to help new arrivals prepare for admission to SOMAFCO ceased operating last December. Since 1979, classes from Kindergarten to "O" level were run by SOMAFCO for thousands of ANC members who refused the racially biased "Bantu Education" offered to the majority of black South Africans under apartheid.

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"FOOD AND PEOPLE" is the theme of the 17th Photo Contest organized by the Asian Cultural Centre for UNESCO (ACCU). May 30 is the closing date for entries which may be submitted by professional or amateur photographers in the Asia and Pacific Region.
Winning works will constitute a travelling exhibition to go round countries in the Region.
Among about 5,000 participants from 22 countries in the 16th contest on "Animals in Daily Life", 110 received awards. The three Grand Prize winners were Kriengkrai Waiyakij (Thailand), Syed Azmat Ali Zaidi (Pakistan) and Yan Ba Liung (China).

☛ *ACCU, 6 Fukuromachi, Shinjuku-ku, Tokyo, 162 Japan*

ASSESSING THE DAMAGE

Research indicates that environmental damage in the wake of the Gulf war is not as bad as first feared

Most of the remaining oil from last year's Persian Gulf war oil spill is packed on the shores of Saudi Arabia, a stretch of some 500-600 kilometres. In many places, the oil has seeped into the sand, forming thick crusts in the intertidal zone.

However, it now seems that the oil spill has not caused as much devastation to the marine environment as was initially feared, and the bottom of the Gulf seems to have been spared.

"The oil does not seem to have sunk to the bottom. We have done 195 dives and only seen oil on the bottom in 3 cases; and those were tar balls washed from the shore," said Jacqueline Michel of the U.S. National Oceanic and Atmospheric Administration (NOAA), co-leader of the second leg of a 100-day study-cruise of the Gulf, to determine the extent of environmental damage there.

COMMANDER ROBERT HUNT SURVEYS AN OIL POLLUTED BEACH (Photo UNESCO/N. Tornüdd).

The cruise, which began on February 26, is co-sponsored by UNESCO's Intergovernmental Oceanographic Commission, the Regional Organization for the Protection of the Marine Environment and NOAA which offered the use of its research vessel, the Mt Mitchell . The second leg studied near-shore environment, the areas that were most heavily hit by the spill.

A total of 13 research projects were in progress on board the Mt Mitchell during this leg. The original plans had been for eight, but as the work got underway, new projects were added by the participants, many of whom came from the region; Bahrain, Kuwait, Iran, Oman, Qatar and Saudi Arabia were represented, as well as the USA and Germany. Twenty-two scientists stayed on board the Mt Mitchell at any one time, while others worked from the shore.

PAVED BEACHES

Their research found that most of the oil has gathered in the intertidal zone, the area of the shore that is uncovered during low tide. The variations in the Gulf tides are not very significant, in the order of 1-2 metres, but the very flat shores mean that the intertidal zones can be very wide, sometimes extending up to one kilometer.

In this area, the oil has soaked deep into sand, forming "pavements" up to 30-40 centimetres thick. These layers of asphalt have devastated the plant and animal life in these intertidal zones. Underneath the harder crust on top there is still liquid oil which seeps out from time to time.

"It may take up to 30-40 years for the most sheltered bays to lose their oil pavements," said Commander Robert Hunt of NOAA. Hunt worked with a team of surveyors on the shore, making profiles that will be monitored in the future.

The survey work was continued outwards by Jacqueline Michel's team, working in small launches set out each day from the Mt Mitchell.

Once the oil is washed away into the sea, it evaporates, biodegrades or dissolves into the water. Manfred Ehrhardt of Germany and Kathryn Burns of the Bermuda Biological Station were studying the processes of photo-oxidation, the way sunlight degrades oil components, hydrocarbons, in the water.

"The oil appears to be decomposing fast, but we can't say as yet how fast. We are now gathering samples for future analysis, but from the look of it, the concentrations in the water are relatively low," said Manfred Ehrhardt, from the Institute of Marine Sciences in Kiel.

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OCEAN MONITORING IS SUFFERING from a serious shortfall of data as a consequence of the crisis in the former Soviet Union. *"The Russian research fleet has been recalled to harbour. There is neither money nor fuel to operate it,"* said Dieter Kohnke, Chairman of the Integrated Global Ocean Services System (IGOSS) to the Executive Council of UNESCO's Intergovernmental Oceanographic Commission (IOC) meeting in Paris from March 2 to 18. The USSR was the main contributor to IGOSS, providing 34 percent of ocean data in 1990. The shortfall is all the more critical since the Soviet Union - and Canada - were the only two countries providing salinity data, which along with temperature makes it possible to follow and calculate currents and gauge the stratification of water masses.

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Since the fear of skin cancer is putting a damper on sunbathing holidays and AIDS is discouraging more libertine vacations, ***CULTURAL TOURISM*** may well be taking over. But will uncontrolled tourism destroy the very culture the sophisticated new traveler of the 90s wishes to see? And how can countries with a rich cultural heritage prepare themselves for an onslaught of visitors?

These questions were at the centre of discussions at a two-day (April 15 and 16) UNESCO workshop in Jakarta, Indonesia, organized on the occasion of the 20th anniversary of the World Heritage Convention. At the meeting, some 30 architects, archeologists and museum curators from 10 countries in South and Southeast Asian countries shared their experiences and drew up strategies for enabling thousands, even millions of tourists to learn about and enjoy the local culture while, at the same time, mitigating the damage to the sites visited.

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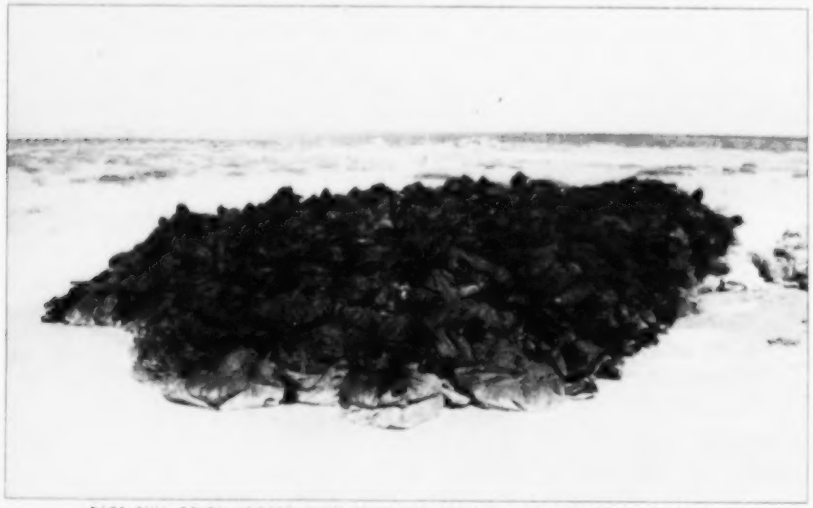
Ehrhardt and Burns had placed pumps under water, which run through large volumes of seawater; several hundred litres during the course of a day. Salt and water are eliminated, until what eventually remains after extraction is a few millilitres of fluid, which contains all organic substances in the seawater. These samples will be analyzed with mass spectrography and gas chromatography in laboratories in Kiel and Bermuda to determine the precise concentrations of oil remaining in the water.



BAGS FULL OF OIL-LOGGED SAND COLLECTED FROM THE BEACHES OF SAUDI ARABIA. (Photo UNESCO/Nina Tornüdd).

CORAL REEFS SAFE

Later legs of the cruise will study the coral reefs and fisheries as well as continue the physical oceanographic surveys started on the first leg. Early reports indicate that the coral reefs have been spared.

"Our goal (for the first leg) was to do a survey of the whole geographical area as rapidly as possible, to get a 'snapshot' of the water masses that control the currents," said Robert Clark, expedition leader on the cruise.

Clark said the cruise had been going very well. *"In a few short weeks we have come up with an international team that has worked well together, motivated by a desire to do good research,"* he said.

All the findings will be shared between the participants, and presented at a meeting in Dubai next January. The results will be also published, as a joint venture of the sponsoring agencies; the IOC, ROPME and NOAA.

"This is one of the first times that the IOC and ROPME put together something of this magnitude. But the results will benefit the whole area for decades to come," Clark said.

These benefits include several baseline studies which will provide fundamental information on the physical, chemical and biological functioning of the Gulf, which will help studies and monitoring of future changes.

The exact size of the Gulf spill is not known, but it is estimated at between six and eight million barrels, making it the largest ever. This oil was dumped by Iraq from the Kuwaiti oil terminal Mina al-Ahmadi and from tanker ships, mostly between 19 and 28 January 1991. Of the oil, approximately half has evaporated, and around one million barrels were recuperated in the initial cleanup. Some 2-3 million barrels remain, mostly on the Saudi shores.

However, the problem of oil pollution in the Gulf is chronic. The Gulf is a centre for oil trade and transports - about 10 million barrels of crude are transported daily in hundreds of tankers. Many of these vessels illegally dump sludge from their tanks into the Gulf.

This, in addition to other sources of oil contamination, is estimated to put about one million barrels of oil per year into the Gulf.

Nina TORNÜDD

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"CULTURE, TOURISM AND DEVELOPMENT", "Technology, Cultural Industries and Development," and "Cultural Pluralism" are the main themes around which the World Decade for Cultural Development (1988-97) will organize its activities over the next two years. The Intergovernmental Committee for the Decade, meeting at Headquarters from April 6 to 10, also approved two projects: "Routes of Faith" - the study of the role of Jerusalem in the three principal monotheistic religions; and preparation of a "World Cultural Atlas".
Luis Bernardo Honwana, writer and former Mozambican culture minister, was elected Chairman of the Committee for a two-year term.

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IN INDONESIA, IT'S GETTING HOTTER. Temperature records dating back to 1866 recently collected by UNESCO's office in Jakarta show there has been an increase in the mean monthly temperature there of 1.66°C between 1866 and 1990.
The 124-year-old set of records came from two sources: those for the period 1866-1935- one of the oldest existing on a tropical region - were compiled by the Dutch colonial government, while the later records were rounded up by UNESCO at the Indonesian Meteorological and Geographical Institute. The findings have significance both globally and for Indonesia, which last year suffered the worst drought this century.
According to UNESCO expert Dr. Robin Harger, the impact of a warmer equatorial region would be to other regions the same as that of a *"stove to a pot of liquid beginning to boil"*.

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The Governing Board of the **OPEC FUND** has approved four projects prepared by UNESCO for the construction of schools in Bangladesh ($8.9 million), in Cape Verde ($2 million) and in Sao Tome and Principe ($1.5 million) and for the development of primary education in Zanzibar, Tanzania ($2.5 million).

TREE PLANTING, gifts of plants to farmers, nature conservation camps for young people, awareness raising campaigns, activities in rural areas to improve the conception of energy-efficient, thus wood-saving, ovens: the environment was at the centre of a Sub-Regional training seminar for UNESCO Club leaders organized in New Delhi from April 6 to 9 by the Indian Confederation of UNESCO Clubs and Associations. At the meeting, 35 Club leaders and members of the UNESCO National Commissions of Bangladesh, Bhutan, India, Nepal, Pakistan, recommended that their already large range of environmental activities be further broadened and intensified.

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UKRAINIAN ARTISTS gave a gala benefit concert on April 4 in Paris' Espace Pierre Cardin for the UNESCO Chernobyl Programme. The chamber orchestra "Concerto Grosso", five sopranos and a bass, performed music ranging from baroque and contemporary to popular Ukrainian music. An exhibition/sale of works by Ukrainian sculptors Wladimir and Vassyl Odrehiwski was also staged in the foyer of the theatre. Total proceeds of about 20,000 FF went to UNESCO's Programme in favour of victims of the 1986 nuclear disaster.

SOPRANOS OULIANA TCHAIKOWSKI (RIGHT) AND ODARKA MAZURYK SING FOR CHERNOBYL

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MISSING LINKS

Seeking libraries in North, UNAL takes its case to the Hague

Question: What does the world's most frequented public reference library have in common with a railroad train in Zaire?

Answer: Both the Bibliothèque Publique d'Information/BPI (14,000 visitors a day) at Paris' Centre Georges Pompidou and Zaire's "Culture Train" are members of the UNESCO Network of Associated Libraries (UNAL).

TRAVELLING EXHIBITION OPENS THE WORLD OF BOOKS TO YOUNG READERS IN THAILAND (PHOTO UNESCO)

Although barely two years old, UNAL already counts 55 libraries: 19 in Africa, 17 in Asia, 9 in Latin America, and 4 in the Arab States - but only 6 in Europe.

"Obviously such a scheme can function efficiently only if it is truly international," said Ms Antje Schurek, coordinator for UNAL within UNESCO's General Information Programme (PGI).

Since indeed one of its main objectives is to promote collaboration between North and South, the matter was recently taken to The Hague, not quite to the World Court, but to the Royal Library where, from March 19 to 21, a "European Workshop of Library Cooperation" was organized by the International Federation of Library Associations and Institutions (IFLA) and the Dutch Centre for Libraries and Literature.

On the agenda were various means for mobilizing European libraries and involving them in such activities as training, exhibitions, book donations, twinning, etc.

Launched in 1990 as a further link in the web of institutions like Associated Schools (2000 in 98 countries) and UNESCO Clubs (3,700 in 100 countries), UNAL, with however limited means, has already proved an effective tool not only for the spread of knowledge but for getting the UNESCO message across by promoting intercultural dialogue, human rights, literacy, environmental and other issues.

Activities have included a Travelling Exhibition of Books for Young Readers and three workshops: on "The Role of Libaries in Promoting Awareness on Environmental Problems" (Bangkok, March 26-29, 1991); on "Intercultural Activities in some African libraries" (Dakar, Senegal, April 30-May 4, 1991) - a meeting at which participants learned more about the "Culture Train" whose library coach, cinema coach, stage platform and storage wagon rolls over 1,320 km in Zaire; and more recently, on "The Role of Libraries in Fighting Illiteracy," in Caracas, Venezuela, from February 2 to 9.

Reports on workshops are available on request as is a brochure on UNAL and how to join: most libraries are eligible provided they are open to the public and serve the local community.

"There are unlimited ways in which libraries in the North can help," said Ms Souad Hubert of the BPI who ran UNESCO-sponsored courses which, between 1987 and 1991, helped train some 120 Third World specialists. She is convinced that if better informed a large number of these libraries would join the Network *"and find it to be a source of enrichment for all."*

Betty WERTHER

☛ *UNAL, General Information Programme*

THE SPIRITUAL DIMENSION

Can religion help combat AIDS? And if so, how?

For those attending a seminar on the subject held at Headquarters on April 7, the answer to the first question was a clearcut *"yes"*. But the second proved far more difficult for the participants, who included representatives of the Catholic Church, the Jewish faith and Buddhism, along with scientists, doctors and jurists. The meeting was organized by UNESCO's Divisions of Youth and Sports Activities and Philosophy, as part of the follow-up to last year's Venice Appeal launched by UNESCO in an effort to mobilize the international community in the fight against AIDS. The gathering was more a plea for help from the scientific and medical communities who have found themselves confronted with a problem of enormous scale that goes beyond mere biology and is intimately entwined with social values and individual behaviour. *"It could take us another century to eradicate AIDS,"* said Professor Jean Paul Levy of the National Agency for AIDS Research (France). *"It's going to be a long haul."*

The various religious authorities all expressed a certain responsibility towards their congregations concerning AIDS. *"We must not judge those who have the virus,"* stressed Monseigneur Lorenzo Frana, Permanent Observer from the Holy See to UNESCO. *"We are possibly guilty of a certain indifference,"* admitted Rabbi René Samuel Sirat, President of Permanent Council of the Conference of European Rabbis. *"Religious authorities believed that AIDS was initially a medical or scientific problem"* he added.

ETHICS AND HOPE!

How can that sense of responsibility be translated into concrete action? *"I feel uncomfortable when asked 'what can religion do against AIDS"* confessed Monseigneur Frana, *"we must all work together."* *"The teaching of ethics is fundamental,"* said Rabbi Sirat. *"We must give hope. We must give a spiritual dimension to humanity."* For Dr. Ananda W. P. Guruge, Sri Lanka's Ambassador to France and Permanent Delegate to UNESCO, *"a healthy attitude to sex, as found in Buddhism, must be promoted."*

Promoting the use of condoms, however, hardly rated a mention. This despite the efforts of some of the medical and scientific participants, who pointed out that apart from chastity and fidelity, condoms were the only sure method of prevention. *"The goal of the (Catholic) Church is to instill a sense of responsibility in the individual, not to argue the pros and cons of condoms,"* recalled Father Olivier de Dinechin S.J., delegate of French Episcopate for Morale Questions on Human Life.

All agreed however, that education was also an essential factor and everything possible should be done in this direction.

Summed up Professor Jean Bernard, member of the French Academy and chairman of the French government's committee dealing with ethics for the human sciences and health: *"The church has a wealth of experience in communicating with young people and giving support to the suffering, that can be of enormous help against AIDS, and should not be ignored. Its position on condoms is an error - but equally wrong are those authorities who preach that condoms are the only means of protection against AIDS, without taking into account chastity and fidelity."*

HELP
CRUSH
AIDS
...LIMIT SEXUAL CONTACT TO ONE FAITHFUL PARTNER
...IF YOU ARE NOT SURE OF YOUR PARTNER USE A CONDOM TO REDUCE RISK
National AIDS Programme
Trinidad & Tobago

CHASTITY, FIDELITY... AND CONDOMS, THE ONLY SURE WAY TO PREVENT AIDS.

Sue WILLIAMS

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"The ***RELATIONS OF HUMAN BEINGS AND THEIR ENVIRONMENT*** *must be respected and regulated by universal principles constituting a moral code that might be a new eco-ethics...which requires the preservation of two essential resources for nature and humankind: bio-diversity and cultural diversity."* This statement is part of the "Declaration of Belem" adopted by scientists at the third UNESCO Forum "Towards Eco-ethics: Alternative Visions of Culture, Science, Technology and Nature," held from April 6 to 10 in Belem in northeast Brazil. The Declaration came after five days of discussion which also stressed the role of women with regard to ecology and population growth, and the importance of cultural traditions for establishing long-lasting balances with their ecosystems.

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MEDICAL EQUIPMENT to facilitate systematic screening for radioactivity was delivered to the Radiation Medicine Research Clinic near Minsk (Belarus) on April 6. Financed by the European Economic Community under the UNESCO Chernobyl Programme, the equipment worth about $500,000, will accelerate the screening and monitoring of nearly 2,2 million victims of the 1986 catastrophe in Belarus who suffer from digestive, respiratory and nervous disorders.

UNESCO SOURCES is a monthly magazine published by the United Nations Educational, Scientific and Cultural Organization. English and French editions are produced at Paris Headquarters, a Spanish edition in cooperation with the Unesco Centre of Catalonia, Mallorca 285, 08037 Barcelona, Spain ; and a Portuguese edition with the Unesco Centre in Porto, rua Jose Falcao, 100 R/C, 4000 Porto, Portugal.

Editor-in-Chief: R. Lefort. **Associate editors**: B. Werther, S. Williams, C. Breuil. **Assistant Managing Editor**: C. Mouillère. **Lay-out**: G. Traiano, F. Ryan. **Promotion and distribution**: P. Chaillier. **Secretary**: D. Maarek.

Photoengraving and printing in Unesco Workshops. **Distribution** by Unesco's specialized services.

Graphic conception: Agence Minium.

LOOKING AHEAD

The 23rd Conference of **INTERNATIONAL NON GOVERNMENTAL ORGANIZATIONS** in Consultative Relations with UNESCO will be held at Headquarters from June 15 to 19. The Intergovernmental Committee for the Universal **COPYRIGHT CONVENTION** will hold its 10th Ordinary Session at Headquarters from June 21 to 24. The 1st Session of the joint IOC/FAO Intergovernmental Panel on **HARMFUL ALGAL BLOOMS**, will take place at Headquarters from June 23 to 25. Throughout the UN system, International Day against **DRUG ABUSE AND ILLICIT TRAFFICKING** will be celebrated on June 26 and **WORLD POPULATION DAY** on July 11. About 50 experts, including some 30 from Eastern Europe and French industry, will attend a meeting on the Strategic Issues of the Transition from A **CENTRALIZED TO A MARKET ECONOMY** in the **CONSTRUCTION SECTOR** beginning with round-table discussions at Headquarters on June 29 and continuing with field visits to construction companies and sites in the Paris region through July 4. An International Congress entitled **"ADVERSE ENVIRONMENTAL IMPACTS ON ASTRONOMY"** will be held at Headquarters from June 30 to July 2. Among topics up for discussion will be the threats to astronomical observation posed by space debris, outdoor lighting, radio noise, thermal turbulence and other forms of man-made pollution, and measures for incorporating astronomical imperatives into future living patterns. The 4th UNESCO Training Course on **SOLAR ELECTRICITY FOR RURAL AND REMOTE AREAS**, at Headquarters from July 1 to 30, will be attended by about 25 scientists, technicians, energy planners and managers from 10 Francophone African countries. The 10th Session of the Intergovernmental Council of the **INTERNATIONAL HYDROLOGICAL PROGRAMME** will take place from July 6 to 11 and be followed, from July 7 to 9, by a meeting of the Committee on the Transfer of Knowledge and Technology. The Council meeting will be preceded, on July 3 and 4, by a Scientific Colloquium on space and time scale variability and interdependencies in various hydrological processes, organized by UNESCO and the International Association of Hydrological Sciences (IAHS).

OUR NEXT ISSUE will focus on the **INTERNATIONAL GEOLOGICAL CORRELATION PROGRAMME** (IGCP) through which scientists have been collaborating on the study of Earth's history, and by gaining a better understanding of such products and processes as mineral resources, natural hazards, the evolution of deserts and coastlines, etc., finding keys to our future.